

Notice of Allowability

Application No.

10/786,156

Examiner

Karen E. Toth

Applicant(s)

KIMURA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the arguments and amendment filed 13 February 2007.
2. ☒ The allowed claim(s) is/are 2-4, 9-12, 14-21, 23 and 31-46.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


CHARLES A. MARMOR II
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to anticipate or make obvious the structure of claims 2-4, 9-12, 23, 34-38, and 40-45, including, *inter-alia*, a biological condition measurement apparatus comprising a unit that individually emits two lights having different wavelengths to a portion of a body being measured, a unit that receives the reflection of the lights and generates detection signals based on the reflections, and a unit configured to measure a biological condition based on the different characteristics of the detection signals, where the wavelength of the first emitted light is longer than that of the second emitted light, and the unit is configured to control the light emissions such that the first light's intensity and/or amount is lower or less than the intensity and/or amount of the second light, and the units are configured to characterize the differences between the detection signals using the different wavelengths and their respective intensities and amounts.

The prior art of record fails to anticipate or make obvious the structure of claims 14-21 and 39, including, *inter-alia*, a biological condition measurement apparatus comprising a unit that individually emits two lights, one being infrared and the other green, to a portion of a body being measured, a unit that receives the reflection of the lights and generates detection signals based on the reflections, and a unit configured to measure a biological condition based on the different characteristics of the detection signals, where the wavelength of the first emitted light is longer than that of the second

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emitted light, and the unit is configured to control the light emissions such that the infrared light's intensity and/or amount is lower or less than the intensity and/or amount of the green light, and the units are configured to characterize the differences between the detection signals using the different wavelengths and their respective intensities and amounts.

The prior art of record fails to anticipate or make obvious the method of claims 31-33 and 46, including, *inter-alia*, measuring a biological condition by individually emitting two lights having different wavelengths to a portion of a body being measured, receiving the reflection of the lights and generating detection signals based on the reflections, and measuring a biological condition based on the different characteristics of the detection signals, where the wavelength of the first emitted light is longer than that of the second emitted light, and the unit is configured to control the light emissions such that the first light's intensity and/or amount is lower or less than the intensity and/or amount of the second light, and the differences between the detection signals are characterized using the different wavelengths and their respective intensities and amounts.

Turcott (US Patent 6997879) discloses an apparatus for measuring a biological condition of a living body comprising a light-emitting unit (element 302) configured to emit individually first and second lights to the portion of the body being measured, the first and second lights having wavelengths different from each other (column 3, lines 45-47); a light receiving unit configured to receive first and second reflected lights to generate first and second detection signals based on the first and second reflected

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lights respectively (column 7, lines 23-32); and a measuring unit configured to measure the biological condition based on the different characteristics of the first and second detection signals (column 7, lines 39-49). Turcott discloses the intensity and/or amount of the higher wavelength of light being greater than that of the lower wavelength of light.

Searfoss (US Patent 5046494) discloses a method of providing therapeutic treatment to a patient by exposing the patient to various wavelengths and intensities of light, where a disclosed method includes light with higher wavelengths and low intensity, and lower wavelengths and high intensity. Searfoss does not disclose using the various lights to perform measurements.

Grace (US Patent 7202793) discloses a method of measuring drowsiness by emitting two wavelengths of light and measuring their reflectance, where the lights may have different intensities, but Grace does not specifically disclose the higher wavelength having a lower intensity than the lower wavelength.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen E. Toth whose telephone number is 571-272-6824. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on 571-272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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